

AMENDMENTS TO THE CLAIMS

1-34. (canceled)

35. (currently amended) A method for transforming a monocot plant comprising:

i) culturing an explant of said monocot plant, or a tissue isolated from said explant, for one to six days in a medium comprising at least one auxin to obtain a cultured tissue;

ii) co-culturing the cultured tissue from step i) with an *Agrobacterium* bacterium comprising a polynucleotide of interest;

iii) selecting cultured tissue into which the polynucleotide of interest has been introduced;
and

iv) culturing the selected tissue on a regeneration medium to obtain a transformed monocot plant.

36. (previously presented) The method of claim 35, in which the explant is from a seed or an embryo of said monocot plant.

37. (previously presented) The method of claim 36 further comprising a step

ia) of isolating a scutellum tissue from the seed or embryo of the monocot plant as the cultured tissue.

38. (previously presented) The method of claim 37 in which the scutellum tissue forms a callus and the callus tissue is used in the co-culturing step ii).

39. (previously presented) The method of claim 38 in which the scutellum callus is made into a suspension culture for the co-culturing step ii).

40. (previously presented) The method of claim 36, wherein an immature embryo tissue is cultured in step i).

41. (previously presented) The method of claim 35, in which the *Agrobacterium* bacterium comprises a vector comprising at least one virulence gene of a Ti plasmid, a left T-DNA border, a right T-DNA border and the polynucleotide of interest located between the left T-DNA border and the right T-DNA border.

42. (previously presented) The method of claim 41, wherein the at least one virulence gene is at least the *VirB* and *VirG* genes.

43. (previously presented) The method of claim 41, in which the vector is a super binary vector that comprises at least one virulence gene from the Ti plasmid pTiBo542 of *Agrobacterium tumefaciens* A281.

44. (previously presented) The method of any one of claims 35-43, wherein the plant is one from the family *Gramineae*.

45. (previously presented) The method of any one of claims 35-43 wherein the plant is a rice plant.

46. (previously presented) The method of any one of claims 35-40 wherein the *Agrobacterium* bacterium is *Agrobacterium tumefaciens*.

47. (previously presented) The method of any one of claims 35-40, wherein the bacteria are present in an amount of 10^6 to 10^{11} cells/ml.

48. (previously presented) The method of any one of claims 35-40, wherein the contacting step ii) is performed in a liquid medium for 3 to 10 minutes, and then maintaining the contacted cultured tissue and *Agrobacterium* cells on a solid medium.

49. (previously presented) The method of claim 41, wherein the at least one virulence gene is at least one virulence gene from the plasmid pTOK162.

50. (currently amended) A method for transforming a tissue of a monocot plant comprising:

i) culturing an explant of an immature tissue of a monocot plant for one to six days on a medium comprising at least one auxin and that induces dedifferentiation of the cells of the explanted tissue to obtain a dedifferentiating or dedifferentiated cultured immature tissue;

ii) contacting the dedifferentiating or dedifferentiated cultured immature tissue with cells of *Agrobacterium* bacteria that comprise a vector comprising at least one virulence gene of a Ti plasmid, a left T-DNA border, a right T-DNA border and a polynucleotide of interest located between the left T-DNA border and the right T-DNA border;
thereby obtaining a transformed plant tissue.

51. (previously presented) The method of claim 50, wherein the immature tissue is an immature embryo tissue.

52. (previously presented) The method of claim 50 or 51, wherein the plant is one from the family *Gramineae*.

53. (previously presented) The method of 52 wherein the plant is a rice plant.

54. (currently amended) A method for obtaining a transformed monocot plant comprising

i) culturing an explant of an immature tissue of a monocot plant for one to six days on a medium comprising at least one auxin and that induces dedifferentiation of the cells of the explanted tissue to obtain a dedifferentiating or dedifferentiated cultured immature tissue;

ii) contacting the dedifferentiating or dedifferentiated cultured immature tissue with cells of *Agrobacterium* bacteria that comprise a vector comprising at least one virulence gene of a Ti plasmid, a left T-DNA border, a right T-DNA border and a polynucleotide of interest located

between the left T-DNA border and the right T-DNA border; thereby obtaining a transformed plant tissue; and

iii) culturing the transformed plant tissue on at least one regeneration medium, thereby obtaining a transformed monocot plant.